

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Claims 6, 13, 18, 32-34 and 36-37 are canceled without prejudice or disclaimer.

Claims 4, 7-12, 14-17, 19-23, 26 and 28 are amended.

Listing of Claims:

1. (Original) A sensor device for use in a human or animal, comprising a probe within which there is located a sensor for an analyte, the sensor device comprising a mesh structure enveloping at least a portion of said probe.
2. (Original) A sensor device according to claim 1, in which the mesh structure comprises a plurality of filaments.
3. (Original) A sensor device according to claim 2, in which the mesh structure comprises a multiplicity of filaments.
4. (Currently Amended) A sensor device according to ~~any one of the preceding claims~~ claim 3, in which the filaments are strips of elongate cross- section.
5. (Original) A sensor device according to claim 4, in which the strips are of width from 5 um to 50um.
6. (Canceled)
7. (Currently Amended) A sensor device according to ~~any one of the preceding claims~~ claim 1 in which the mesh structure defines an open area of at. least 0.3 cm² per cm² of the mesh structure.
8. (Currently Amended) A sensor device according to ~~any one of the preceding claims~~ claim 1, in which the mesh structure defines an open area of not more than

0.7cm² per cm² of the mesh structure.

9. (Currently Amended) A sensor device according to ~~any one of the preceding claims~~ claim 1, in which the mesh structure comprises a plurality of helically wound filaments, at least a first said filament extending helically in the opposite sense to at least a second said filament.

10. (Currently Amended) A sensor device according to ~~any one of the preceding claims~~ claim 1, in which the mesh structure is a woven mesh structure.

11. (Currently Amended) A sensor device according to ~~any one of the preceding claims~~ claim 1, in which the mesh structure comprises a multiplicity of interwoven filaments.

12. (Currently Amended) A sensor device according to ~~any one of the preceding claims~~ claim 11, in which first and second filaments are joined to one another at points of overlap therebetween.

13. (Canceled)

14. (Currently Amended) A sensor device according to ~~claim 13~~ claim 12, in which the filaments comprise metallic ribbon.

15. (Currently Amended) A sensor device according to ~~claim 13 or claim 14~~, in which the filaments comprise at least one metal selected from the group consisting of stainless steel, titanium and gold.

16. (Currently Amended) A sensor device according to ~~any one of claims 13 to 15~~ claim 11, in which the filaments comprise a metallic core coated by a plastics material.

17. (Currently Amended) A sensor device according to ~~any one of the preceding~~

~~claims~~ claim 1, in which the mesh structure comprises filaments of plastics material.

18. (Canceled)

19. (Currently Amended) A sensor device ~~according to any one of the preceding~~
~~claims~~ claim 17, in which points of overlap between filaments are welded.

20. (Currently Amended) A sensor device according to ~~any one of the preceding~~
~~claims~~ claim 1, in which the mesh structure is constructed from monofilaments.

21. (Currently Amended) A sensor device according to ~~any one of claims 1 to 19~~
claim 1, in which the mesh structure is constructed of multifilament yarns.

22. (Currently Amended) A sensor device according to ~~any one of the preceding~~
~~claims~~ claim 1, in which the mesh structure is a braid.

23. (Currently Amended) A sensor device according to ~~any one of the preceding~~
~~claims~~ claim 1, in which the probe comprises a matrix of a permeable material, and the sensor is located within the matrix.

24. (Original) A sensor device according to claim 23, in which the mesh defines openings, and the permeable material of the matrix extends at least partially into the openings.

25. (Original) A sensor device according to claim 24, in which the permeable material substantially fills the opening, whereby the mesh structure and the permeable material filling said openings form a substantially smooth outer surface of the sensor device.

26. (Currently Amended) A sensor device according to ~~any one of the preceding~~
~~claims~~ claim 1, in which the mesh structure is a mesh sleeve.

27. (Original) A sensor device according to claim 26, in which the external diameter of the mesh sleeve is from 0.5 to 1mm.
28. (Currently Amended) A sensor device according to ~~any one of the preceding claims~~ claim 1, in which the probe comprises first and second analyte sensors embedded in a matrix, the matrix being permeable to at least first and second analytes to be determined respectively by said first and second sensors.
29. (Currently Amended) A sensor device according to ~~any one of the preceding claims~~ claim 1, comprising a sensor for determining at least one parameter selected from PO₂, PCO₂ and pH.
30. (Currently Amended) A sensor device according to claim ~~30~~ 29, comprising a first sensor for PO₂, a second sensor for pCO₂ and a third sensor for pH.
31. (Currently Amended) A sensor device according to ~~any one of the preceding claims~~ claim 30, which further comprises a temperature measurement device.
32. (Canceled)
33. (Canceled)
34. (Canceled)
35. (Currently Amended) A ~~method according to claim 34~~ sensor device according to claim 1, in which the sensor probe comprises one or more optical sensors.
36. (Canceled)
37. (Canceled)